

# Attachment #11

## Larson Acres Environmental Assessment Addendum #1

Summary and Response to Written and Verbal Public Comments to the DNR  
Environmental Assessment, August 14, 2009

On July 20, 2009, the Department issued a news release notifying the public that an environmental assessment (EA) had been completed for a proposed expansion of a dairy facility run by Larson Acres Dairy, LLC. The assessment has been made available for public review and comment since this release date. In addition, a public informational open house/meeting was held at the Evansville High School on August 4, 2009. The comment period officially ended at 4:30 PM on August 10, 2009. Below we have summarized and responded to both verbal and written comments received during the comment period.

The purpose of the EA is to provide the public the opportunity to fully understand the scope of the project, potential impacts and to address the need for an environmental impact statement. The comment period is provided to give the public the opportunity to further inquire, submit pertinent information regarding the proposal, as well as, to provide comments, questions and/or concerns. The comment period is also used to help decision makers gauge the level of controversy over the proposal and address public concerns.

During the informational meeting, the Department counted approximately 230 attendees of which twenty-eight (28) provided verbal public support and three (3) objected to Larson Acres operation, the proposed expansion and content provided within the EA. Written comments received over the term of the notice included twenty-four (24) comments supporting the EA and/or project and eight (8) comments objecting to the EA and/or project.

We have generalized and summarized both written and oral comments into categories as described below.

1. **Comment:** The Department received conflicting comments from those in support and those opposed to the project as to whether or not the Department should conduct an Environmental Impact Statement (EIS)

**Response:** An EIS will not be needed for this project since it does not involve a major action that would significantly affect the quality of the human environment. The EA which was prepared gives adequate full disclosure information for the public, and for decision makers to make informed decisions about what the proposal entails. Each action which requires an EA to be prepared under WEPA is reviewed to determine whether a full EIS process is necessary to give adequate information to describe the proposed action, which an EA might not give. This

project did not rise to that type of decision. The Larson Acres EA and response to comments gives full disclosure for the proposal.

2. **Comment:** Regarding the impact Larson Acres Dairy operation has on the local, regional, and national economy and how Larson supporters stand to gain economically through farm expansion. An additional related comment in support of the proposal pointed out that increasing milk production at Wisconsin farms limits the need to import foreign milk.

**Response:** An economic evaluation is presented in Section 4 of the EA. The expansion of the dairy operation will create jobs locally and regionally; however, the Department does not qualify how the specific jobs created will impact other businesses or jobs not directly involved with the dairy operation and are addressed in the Section 3, "Significance of Controversy over Environmental Effects" on page 21 of the EA. Socio-economic concerns, such as the disappearance of the small scale family farm, are beyond the scope of the proposed WPDES permit and the DNR's overall regulatory authority. Comments and opinions from people who stand to gain monetarily from the expansion are not considered more or less important than comments from people who have some other stake in the project. Whether the dairy industry uses the family farm or industrial farm operations, such as CAFO's, for the source of the overall supply of milk is an industry policy decision, which is beyond the scope of this proposal. No changes to the body of the EA were made in response to this comment.

3. **Comment:** Comments were received addressing Larson Acres past and projected compliance record.

**Response:** Compliance with environmental regulations is achieved through reporting, inspections, and overall enforcement of the WPDES and Nutrient Management Plan. This is discussed at various locations in the EA including but not limited to Sections 1.2, 2.2 and 3.2. Both the WPDES and Nutrient Management plan are established to ensure all environmental regulations are met. The Department did not use a comparative analysis from other dairies while evaluating the Larson Acres proposal. Larson Acres' history of compliance with local regulations is noted, but is a local issue, which is not part of the WPDES permitting process. The Department will evaluate the WPDES permit compliance history as part of the permit reissuance process. No changes to the body of the EA were made in response to this comment.

4. **Comment:** The establishment of large dairy operations using innovative technologies is changing the character agricultural industry in positive/negative ways.

**Response:** The EA does not assess how Larson Acres impacts the overall dairy industry. No changes to the body of the EA were made in response to this comment.

5. **Comment:** Opinions regarding the health and welfare of the livestock at Larson Acres ranged from poor to excellent.



**Response:** Generally, the health and welfare of livestock is an opinion of the industry or individual. The Department accepts that there are differences of opinion amongst the public. No changes to the body of the EA were made in response to this comment.

6. **Comment:** Supporters request the Department proceed with WPDES Permit issuance without delay, and objectors requested the Department not process the application nor issue the permit. In addition, a formal public hearing was requested.

**Response:** The Department will evaluate the proposed permit accordingly and use the content of this EA to assist in the reissuance of the permit. The permit application public notice process for the permit application will include the public option to request a formal public hearing. No changes to the body of the EA were made in response to this comment.

7. **Comment:** Larson Acres has provided the University community and others in the dairy industry educational opportunities to learn the most recent innovations and best management practices currently being used by the dairy industry.

**Response:** The Department notes this comment. No changes to the body of the EA were made in response to this comment.

8. **Comment:** The Department inaccurately reported the condition of Norwegian Creek.

**Response:** Norwegian Creek is addressed on pages 11 and 12 of the EA. The content on these pages is supported by a study conducted by Jim Amrhein, Water Resources Management Specialist with the DNR, Attachment #13, written by Jim Amrhein, further clarifies the Department's position on the statement in the EA. The Department has amended the EA to include additional information taken from documents submitted by Garvey, McNeil & Associates on behalf of Green-Rock Citizens for Clean Water as received on August 10, 2009. Refer to the attached record of changes made to the EA.

9. **Comment:** A wastewater treatment facility similar to what is being proposed at the Main Facility is needed at the Heifer Facility. In addition, comments were made that the EA does not adequately address environmental issues involving the operation of the Heifer Facility.

**Response:** A wastewater treatment system is not being proposed and is not required at the Heifer Facility. Regulations require that the manure produced at the Heifer facility be addressed through standard code compliance and adherence to the Nutrient Management Plan (NMP). The subject of the EA is Larson Acres' Dairy Operation including the Main and Heifer Facilities. Larson Acres proposed to expand the number of animal units at the Main Facility and only makes minimal modifications to the Heifer Facility. The EA evaluates the Main Facility in greater detail in direct relationship to the changes proposed. No changes to the body of the EA were made in response to this comment.

10. **Comment:** The Department is ignoring submitted relevant information regarding the documented environmental contamination.

**Response:** This comment is in reference to the submittal of two (2) compact discs containing exhibits from a siting hearing on March 10, 2007. The submitted information lacked form, was disorganized, and was voluminous. The Department did not ignore this information; rather, requested that the submitter summarize and define exactly what the documents were attempting to communicate in a readable and succinct format. This request was made in an e-mail dated July 21, 2009, and is included as Attachment #13 to the EA. In response, the Department received the requested summary in the form of a letter from Garvey, McNeil & Associates, S.C. on behalf of Green-Rock Citizens for Clean Water dated August 7, 2009, and is included as Attachment #14 to this EA. The EA has been updated to fully address issues raised in the August 7, 2009, Garvey submittal (see comment #8 herein).

During the comment period the Department also received a number of documents submitted as part of a letter from Michael, Best, Friedrich, LLP on behalf of Larson Acres, dated August 10, 2009. This submittal was intended to respond to the Garvey discs referenced above. The Department used a similar approach and did not evaluate each document submitted by Michael, Best, Friedrich, LLP on behalf of Larson Acres, rather used a summary of the submitted documents provided by Michael, Best, Friedrich, LLP on behalf of Larson Acres. In both cases the EA was update accordingly.

11. **Comment:** Larson Acres should not be classified as an Industrial Wastewater Facility for which and EA is required prior to approval of plans and specifications for proposed expansion.

**Response:** The Department respectfully disagrees with this comment and believes an EA is required. The interpretation of Department Administrative Code is beyond the scope of the EA, and this type of suggested controversy must be dealt with under separate procedures. No changes to the body of the EA were made in response to this comment.

12. **Comment:** Groundwater is being impacted as a result of the Larson Acres Dairy Operation.

**Response:** Groundwater concerns are fully addressed in *Section 3 DNR Significance Evaluation* 3(b) "Groundwater Impacts" on pages 17-18 and in *Section 2 DNR Evaluation of Environmental Effects*, sub-section 3(d) "Surface and Groundwater Resources" on pages 12-15 of the EA.

13. **Comment:** The proposed expansion will result in an increase in unpleasant odor originating from the farm.

**Response:** Odor concerns are fully addressed in *Section 2 DNR Evaluation of Environmental Effects*; subsection 2(b) "Odor" on page 9 of the EA.



14. **Comment:** Comments were received requesting that the DNR require Larson Acres to be bonded against negative impacts to the environment. A commenter voiced concern that the Larson's may sell their operation to an out-of-state interest in the future.

**Response:** Applicable codes do not give the DNR authority to require bonding for this activity. Provisions to include bonding may be addressed in the local permitting process. Conjecture regarding the sale of this business in the future is beyond the scope of the EA. No changes to the body of the EA were made in response to this comment.

15. **Comment:** Concern was expressed that the agricultural industry in Rock County hires immigrant labor as opposed to hiring U.S. citizen labor.

**Response:** The Department is not responsible for the labor practices of any industry. Other government organizations have this responsibility.

This concludes the Departments official response to comments received during the EA review period. A complete catalog of changes is also provided as Addendum #2 to the updated July 20, 2009 Environmental Assessment.





# Attachment # 12

## Addendum #2

### Larson Acres Environmental Assessment

### Record of Revisions

The Larson Acres Environmental Assessment (EA) was released for public comment on July 20, 2009. The comment period was designed to give the public the opportunity to become familiar with the proposed dairy expansion, to comment the proposal, and provide comment/concerns regarding the content of the EA document. The comment period closed on August 10, 2009.

Comments made by the public are addressed in Addendum #1. Some of these comments created the need for the Department to update the July 20, 2009 EA. A summary of changes made to the July 20, 2009 EA are provided below. Note pages and paragraphs referenced reflect the July 20, 2009, EA.

1. Page 2, 1<sup>st</sup> paragraph, 2<sup>nd</sup> sentence now reads: "If Larson Acres' Plans and Specifications for the expanded Main Facility..."
2. Page 2, 3<sup>rd</sup> paragraph, 2<sup>nd</sup> sentence now reads: "That application allowed them to continue to lawfully operate with an expired permit."
3. Page 2, 3<sup>rd</sup> paragraph, 6<sup>th</sup> sentence now reads: "After completion of the proposed expansion, the Farm will generally consist of..."
4. Page 2, 4<sup>th</sup> paragraph, 2<sup>nd</sup> sentence now reads: "Larson Acres proposes to construct new buildings, add 2,607 animals (2,660 animal units) and expand the current wastewater treatment system at the Main Facility."
5. Page 3, 2<sup>nd</sup> paragraph, 1<sup>st</sup> sentence now reads: "The proposed expansion at the Main Facility will include the construction of a cross ventilated freestall barn, milking parlor, four nursery barns for newborn calves, a solids stacking slab, a youngstock barn, additional feed storage and an expanded silage leachate containment/treatment system."
6. Page 3, 2nd paragraph, 2<sup>nd</sup> sentence now reads: "The Main Facility features...a holding area with a double-22 milking parlor, a calf barn and heifer shed..."
7. On pages 4, 12 and 20, the paragraphs beginning with "Pursuant to NR 243.15(6), Wis. Adm. Code have been revised to read: "Pursuant to NR 243.15(6), Wis. Adm. Code, Larson Acres will be seeking approval to apply, manage and utilize tea water from the ISS system through a center pivot irrigation system. Tea water will be utilized on a number of fields in the nutrient management plan through traditional land application methods; however, at this time Larson Acres is only seeking approval to spray irrigate tea water on one field." These changes now appear on pages 4, 13, and 21 in the August 14, 2009 EA.

8. On pages 4, 13 and 20, the following paragraph has been added: "Remote soil moisture sensors have been installed throughout the field proposed for tea water irrigation. Soil moisture sensors indicate the relative saturation of the field at any specific moment in time. This technology will assist Larson Acres and University of Wisconsin-Extension in planning tea water applications so the plant can best utilize the nutrients as well as reduce the risk that tea water will infiltrate field tiles." These changes now appear on pages 5, 13, 22 in the revised August 14, 2009 EA.
9. Page 6, under the heading *Documents, plans, studies or memos developed to support this proposal include*, bullet 12 now reads: "Town of Magnolia, Town Board Meeting Transcript of Proceedings by Linda Kuhlman (March 10, 2007)."
10. Page 7, under "5. Attachments", Attachments 11 through 17 have been added and Attachment #1 now reads: "Environmental Analysis Questionnaire, Conestoga Rovers & Associates (May 19, 2009)"
11. On page 8, the following sentence has been added to the end of the 4<sup>th</sup> paragraph: "Larson Acres does not currently dry grain or operate a feed mill." These changes now appear on the end of the 5<sup>th</sup> paragraph on page 8 in the revised August 14, 2009 EA
12. Page 9, 4th paragraph, 1<sup>st</sup> sentence now reads: "The operation has applied for local approval of its proposed expansion and submitted an odor management worksheet as part of the local approval process in accordance with a local ordinance and ch. ATPC 51, Wis. Adm. Code."
13. Page 9, bottom of page, the following sentence was added to the end of Section 2(c): "Dust control measures, including proper construction and watering of driveways, are outlined in the Odor Management Plan submitted with Larson Acres' application for local approval of the proposed expansion." This change now appears on page 10, 2<sup>nd</sup> paragraph in the revised August 14, 2009 EA.
14. Page 10, 3<sup>rd</sup> paragraph, now reads: "An updated version of ch. NR 445, Wis. Adm. Code, was published on July 1, 2004. The July 2004 version of this rule provided a 36-month exemption for livestock operations to come into compliance; this exemption was scheduled to expire in June 2007. However, in 2008, the Natural Resources Board voted to extend the exemption to 2011 to coincide with the completion of USEPA's national study on air pollutants from CAFOs. The extension to 2011 was approved, and the revision to NR 445 providing the extension was enacted in 2008." This change now appears on page 10, 5<sup>th</sup> paragraph in the revised August 14, 2009 EA.
15. Page 12, end of 3<sup>rd</sup> paragraph now reads: "(See Attachment #13 for more information)"
16. Page 14, following sentence added to end of 3<sup>rd</sup> paragraph: "Despite the fact that its current WPDES permit does not require Larson Acres to do so, since 2007 the Farm has submitted a nutrient management plan designed to comply with the new NR 243 rules." This change now appears on the top of page 15 in the revised August 14, 2009 EA.



17. Page 15, the following sentence was added to the end of 5. Energy Impacts section: "No energy recovery systems are being proposed at this time." This change now appears on page 16 in the revised August 14, 2009 EA.
18. Page 18, the following was added to the end of Section 3(b) Groundwater Impacts: "An article in the July 26, 2009 Wisconsin State Journal, notes that historic and ongoing groundwater contamination concerns are prevalent throughout Rock County and are not limited to the area immediately surrounding Larson Acres. This article has been included in the EA as Attachment #17."
19. Page 20, A new Section 3(e) Surface Water Impacts (Norwegian Creek) has been added and reads:

The Department was provided a summary of information on a sampling program in the Norwegian Creek area. The surface water and tile line sampling was conducted in November of 2006. This information shows elevated concentrations of nitrates. This is an area adjacent to the Heifer Facility and is in an area where Larson Acres has spread manure in the past and it is included in their nutrient management plan for future landspreading. The drainage area for this stream and the sampling project is a complex system with several contributing sources. The area includes many different fields, tile lines and two feeder streams. Since this data covers a short time frame and happened several years ago, determining exactly what occurred to create these results would be a difficult task. The following items will be addressed as part of the permit issuance process.

- The Nutrient Management plan and the best management practices covering this area will be reviewed to insure that these fields are being managed consistently with the nutrient management requirements in NR 243 and NRCS 590. Requirements in the recently revised NR 243 nutrient management section are designed to address concerns with landspreading practices and better protect surface water. A review as to the need for additional requirements will be completed.
- The need for additional monitoring and observations will be assessed. The nutrient management plan for the farm includes the best management practices from the tile line management plan. This tile line management plan includes visual monitoring of tile lines during and after manure applications on fields that have known tile fields, additional tillage practices and equipment, application scheduling, and field and weather monitoring. The nutrient management plan and the tile line management plan are currently being reviewed approval. The will also be evaluated to assess the needs for additional requirements.
- The Department will continue periodic stream sampling and evaluations and will evaluate the need to conduct additional stream sampling.
- The need to include specific management practices or monitoring requirements for this area in the permit will be evaluated.

-END-





# Attachment #13

## Norwegian Creek

Norwegian Creek is a 6 mile long stream that has its headwaters in Magnolia Township of Rock County and flows southwest into Green County where it joins the Sugar River at Decatur Lake. The stream has not been formally classified since it does not currently contain a point source discharge and therefore gets the "Default" classification of "Warm Water Sport Fishery". While the lower portion of the stream contains sport fish from time to time due to the proximity of Decatur Lake, Norwegian Creek is mainly a warm water forage fishery. The Green County portion of the stream is designated as an "Exceptional Resource Water" mainly due to the presence of a state species of concern – the least darter. Recent monitoring since 2000 has shown various segments contain a number of species of forage fish, including the least darter (See Table 1).

**Table 1: Fisheries Monitoring of Norwegian Creek since 2000**

| Species              | CTH E (2006)     | STH 104 (2002)   | CTH B (2006)     |
|----------------------|------------------|------------------|------------------|
| Central Stoneroller  | 116              | 106              | 47               |
| Creek Chub           | 115              | 113              | 44               |
| Johnny Darter        | 113              | 11               | 22               |
| White Sucker         | 40               | 13               | 4                |
| Sand Shiner          | 36               |                  | 12               |
| Brook Stickleback    | 35               | 23               | 266              |
| Bluntnose Minnow     | 28               |                  | 212              |
| S. Redbelly Dace     | 27               | 93               | 120              |
| Central Mudminnow    | 14               | 2                | 1                |
| Fantail Darter       | 7                | 110              | 22               |
| Fathead Minnow       | 3                |                  | 53               |
| Blackside Darter     | 2                | 2                |                  |
| Least Darter         | 2                |                  | 5                |
| Banded Darter        | 1                |                  |                  |
| Green Sunfish        |                  | 2                |                  |
| Bigmouth Shiner      |                  | 55               |                  |
| Bluegill             |                  |                  | 1                |
| <i>Warmwater IBI</i> | <i>37 (Fair)</i> | <i>34 (Fair)</i> | <i>27 (Poor)</i> |

Although there are a variety of species in each section of the stream, many of them are considered "tolerant" of water pollution and habitat degradation, and low flow, thus the Index of Biotic Integrity (IBI) is poor to fair. The fisheries assemblages in this stream are likely impacted by habitat degradation due to the current and historic intensity of agriculture in the watershed. The stream is wide and sandy in most places with some areas of channelization.

In addition to fish surveys, macroinvertebrates were also sampled from the stream. In 2002 the creek was sampled at STH 104. The Hilsenhoff Biotic Index (See Table 2) was 4.04, or "Very Good" for this section of stream. In 2006, a macroinvertebrate sample was taken at Gempler Road. The Hilsenhoff Biotic Index was 4.06 or "Very Good" also.

**Table 2: Hilsenhoff Biotic Index**

| Biotic Index | Water Quality | Degree of organic pollution          |
|--------------|---------------|--------------------------------------|
| 0.00-3.50    | Excellent     | No apparent organic pollution        |
| 3.51-4.50    | Very Good     | Possible slight organic pollution    |
| 4.51-5.50    | Good          | Some organic pollution               |
| 5.51-6.50    | Fair          | Fairly significant organic pollution |
| 6.51-7.50    | Fairly Poor   | Significant organic pollution        |
| 7.51-8.50    | Poor          | Very significant organic pollution   |
| 8.51-10.00   | Very Poor     | Severe organic pollution             |



The quality of Norwegian Creek, as indicated by the biologic community, is good. Much has been made of the warm water index of biotic integrity (IBI) ratings for various sections of the stream and at CTH B in particular. However, the IBI alone does not tell the whole story. To begin, the warm water IBI as developed by Lyons (1992) was developed for larger, warm water streams and the challenge has been coupling this IBI with smaller, headwater streams with relatively lower populations, tolerant fish species and lack of top level predators. The IBIs designed for larger streams may consistently mischaracterize and undervalue the headwater streams (Lyons, 2006). There has yet to be a metric designed to consistently rate these perennial cool-warm transitional headwater streams.

However, in the absence of a quantitative measure, one can qualitatively look at the population and diversity to the fishery and use metrics developed for both the warm water IBI and the small and intermittent stream IBI (Lyons, 2006) to gauge the health of the stream. The number of native species, number of intolerant species, number of minnow species, number of darter species, number of headwater species, and number of all fish per 100 meter section of stream sampled (excluding tolerant species) are metrics that can be used to evaluate a stream of this size.

Specifically for Norwegian Creek at CTH B, 809 fish were collected in a 205 meter stretch of stream. All were species native to Wisconsin waters. In total, 13 different species were found at this site – generally considered “fair” for a larger stream or “good” for a headwaters stream. In addition to the Johnny darter and fantail darter, the least darter - an intolerant, state species of concern - was found at the site. Finding 3 darter species in a stream of this size is generally considered “good” as darters are small benthic species that tend to be intolerant of many types of environmental degradation (Lyons, 1992). While brook stickleback and bluntnose minnow, two tolerant species, dominated the fish assemblage, this is not unusual for a smaller, headwater stream (Lyons, 2006).

Macroinvertebrate samples taken from the stream and evaluated according to the Hilsenhoff Biotic Index (Hilsenhoff, 1987), indicate “very good” water quality and “possible slight organic loading”. The macroinvertebrate assemblage is dominated by the amphipod *Gammarus pseudolimnaeus*, which generally indicates high ground water input.

#### References:

- Hilsenhoff, W. L. 1987. An improved biotic index of organic stream pollution. The Great Lakes Entomologist. Vol. 20, No. 1. Pages 31-36.
- Lyons, J. 1992. Using the index of biotic integrity (IBI) to measure quality in warm water streams of Wisconsin. General Technical Report, NC-149, North Central Forest Experiment Station, U.S. Forest Service, St. Paul, Minnesota.
- Lyons, J. 2006. A fish-based index of biotic integrity to assess intermittent headwater streams in Wisconsin, USA. Environmental Monitoring and Assessment. 122: 239-258.



# GARVEY McNEIL & Attachment #14 ASSOCIATES, S.C.

ATTORNEYS AT LAW

I R. Garvey  
G. McNeil  
A. Pabellon  
McKeever  
M. Bensky

**The content of this attachment has  
been addressed in the updated EA  
and/or comment/response addendums.**

August 7, 2009

AUG 10 2009

Mark Cain, Wastewater Engineer  
Wisconsin Department of Natural Resources  
South Central Regional Headquarters  
3911 Fish Hatchery Road  
Fitchburg, WI 53711

**DEPT. OF NATURAL RESOURCES  
FITCHBURG SERV. CENTER**

Re: Comments on the Environmental Analysis and Decision on the Need for an  
Environmental Impact Statement for **Larson Dairy, Inc.**

Dear Mr. Cain,

I write on behalf of the Green-Rock Citizens for Clean Water and several residents who qualify as "affected persons" to comment on the Environmental Analysis ("EA") for the proposed re-issue of the WPDES permit for Larson Dairy.

The EA is incomplete and inaccurate. The past operational record of this applicant/permittee requires that the Department complete an Environmental Impact Statement on this permit re-issue.

More than a year ago we provided the Department with the record of a hearing held by the Town of Magnolia relative to Larson's request for a conditional use permit from the Town for the Heifer Facility. As you know, Larson erected and populated that facility without obtaining the necessary permits from the town, and was subsequently penalized for doing so.

The Town's hearing was held March 10, 2007, and the primary topic at that hearing was the condition of Norwegian Creek. The only purpose in submitting that information to the Department was to make sure the Department was aware of the environmental problems resulting from the Heifer Facility with the expectation that when that facility was included in a WPDES permit that permit would include provisions that would eliminate the problems the Heifer Facility was causing. At the time, we were in frequent contact with the Department regarding the status of the long delayed revision of the then-existing WPDES permit to include the 'new' Heifer Facility.

We were deeply disappointed to receive an email from you on July 21, 2009, in which you stated that the Department is "not able to go through the entire submittal to figure out what is relevant" to the re-issue of the WPDES permit, which will include the Heifer

One Odana Court ■ Madison, WI 53719

Telephone (608) 256-1003 ■ Facsimile (608) 256-0933 ■ [www.gmmattorneys.com](http://www.gmmattorneys.com)





Facility. All of that submittal is relevant; that was the point of submitting it to the Department. Your email to us is essentially a statement that the Department intends to ignore these materials submitted on behalf of members of the public.

I have no doubt that the Department was able to "go through" the entire submittal from Larson. It should also be able to go through the data we submitted and utilize it in the preparation of the environmental impact of the re-issued WPDES permit. The Department is abdicating its obligation to the public and to the natural resources of the state if it fails or refuses to consider materials submitted by members of the public while finding no problem with considering material submitted by the applicant.

The public's confidence in the Department is shaken and undermined when the Department ignores and refuses to even consider materials relevant to water quality that are submitted by affected residents. We request that our entire submittal of materials be considered in evaluating the potential environmental impact of this re-issue.

When the Department does so, it will learn again (These test results have been shared with the Department previously.) that the Town retained an independent consultant to test the water quality in Norwegian Creek. That consultant was David Marshall, a retired DNR employee, and the results of his testing are attached. They show conclusively that Norwegian Creek declined precipitously in water quality as it passed the Larson property. Dr. Emily Stanley, a University of Wisconsin Assistant professor in Zoology and the Center for Limnology, testified that the contamination of Norwegian Creek had the highest concentration of nitrates she had ever seen, more than 200 ppm. We have enclosed a copy of the testimony from that hearing.

Accordingly, the statement on page 11 of the EA that "Department lead studies have shown that the water quality in Norwegian Creek is good near the Heifer Facility" is either just plain wrong. It is in direct conflict with data that the Department has in its files and which is ignored in the EA.

We have attached to this letter Exhibit A, consisting of ten pages showing the results of the water quality testing that was done on several dates in late 2006 and early 2007. The Magnolia Town Board considered this evidence at the March 10, 2007, hearing and made Findings of Fact and Conclusions of Law relative to the issuance of a conditional use permit for the Heifer Facility. These Findings and Conclusions are attached to this letter as Exhibit B and should be both considered by the Department and referenced in the EA.

Note: The inclusion with this letter of these materials from the record of the March 10, 2007, hearing should not be considered a substitute for departmental review and analysis of the entire record of that proceeding.

The EA makes absolutely no mention of the water quality problems in Norwegian Creek that have been caused by Larson. This would seem to be a gross failing of the EA, in as much as the purpose of the environmental assessment (This EA is referred to as an "analysis" on its face and as an "assessment" in the press release.) is to "inform decision-



makers of a proposed action's effect on the environment, and which develops, describes and evaluates alternatives, and provides sufficient evidence to determine whether the proposed action is a major action." NR 150.02(9), Wis. Admin. Code. In as much as the EA ignores evidence of environmental problems resulting from Larson's operations in the past, it does not serve as a useful tool for informing decision-makers of the proposed action's impact on the environment. The operational history of the facility is exceedingly relevant to the re-issue of a permit.

The EA also ignores the documented evidence of the high levels of contamination in the drinking water well that serves the residence at the Heifer Facility. I personally attended meetings at which DNR staff was present and at which the nitrate contamination of the drinking water well was discussed. The Department has this information. Nevertheless, we have enclosed Exhibit C, which provides data on the water quality in nearby wells. Those of relevance are the Yoder wells, at the two residences on either side of County Highway B at the locations shown on the map, and the drinking water well at the residence on the Heifer Facility itself. The evidence at the hearing (not shown on Exhibit C) was that that well had over 30 PPM nitrates. The EA leaves the reader, as well as the decision-makers, in the dark as to whether that well is even still in use or whether the nitrates have dropped below the acceptable level of 10 ppm.

The proposed action here is the re-issue of the WPDES permit, and that in turn is triggered by the proposal to expand the Main Farm, as well, presumably, by the addition of the Heifer Facility to the operation, since that facility has not previously been included in a WPDES permit. The EA focuses almost entirely on the Main Farm and largely ignores the Heifer Facility, although it is proposed that they be included in the same WPDES permit.

Since Larson now proposes to install and use an ISS at the Main Farm, but not at the Heifer Facility, the EA should at the very least address all of the environmental problems that have been reported or have occurred at the Heifer Facility since it was populated with animals.

The Main Farm and the Heifer Facility are in different watersheds, are entirely separate facilities, and will use different processes to manage manure: the Main Farm will use an ISS, and the Heifer Facility will continue to land apply liquid manure and wastewater. For these reasons, we request that each facility should be subjected to a separate analysis and review and that they should be on separate WPDES permits when permits are issued.

Alternatively, the permit should require that an ISS be installed at the Heifer Facility. If it is shown that system will reduce the environmental impacts of the Main Farm, there is no reason not to require it at the Heifer Facility, which has a documented history of causing environmental problems.

In light of Larson's uncontroverted track record at the Heifer Facility, as well as the long-running controversies in the community over this operation, there can be no question that



this proposed re-issue of a WPDES permit is a Type I Action, a major action which will significantly affect the quality of the human environment.

Ideally, the re-issued WPDES permit will go even further and require the installation of a water treatment facility such as would routinely be required for any municipality producing a volume of manure equivalent to that which Larson will produce. The Department has the obligation and the authority to eliminate water pollution in Wisconsin, and it has the authority to require all practices that will achieve that objective, including the installation of a water treatment facility.

We request that the department conduct a full environmental impact statement of the proposed re-issue of the Larson Dairy inc. WPDES permit.

Sincerely,

GARVEY MCNEIL & ASSOCIATES, SC

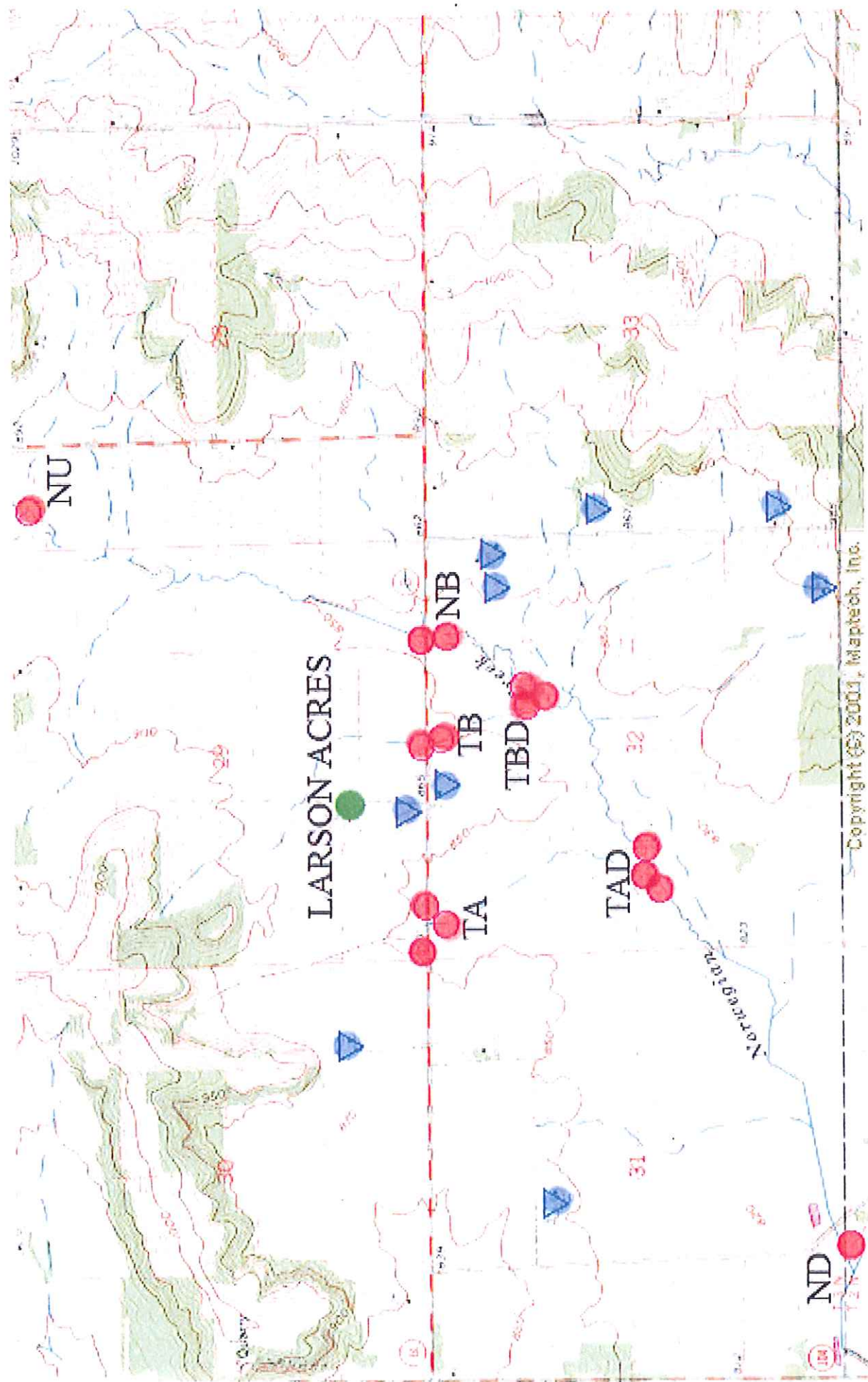
BY

A handwritten signature in black ink, appearing to read 'PM', with a long horizontal flourish extending to the right.

Peter McKeever  
Attorney

cc: Sen. Mark Miller (w/o enclosures)  
Rep. Spencer Black (w/o enclosures)  
Green Rock Citizens for Clean Water (w/o enclosures)

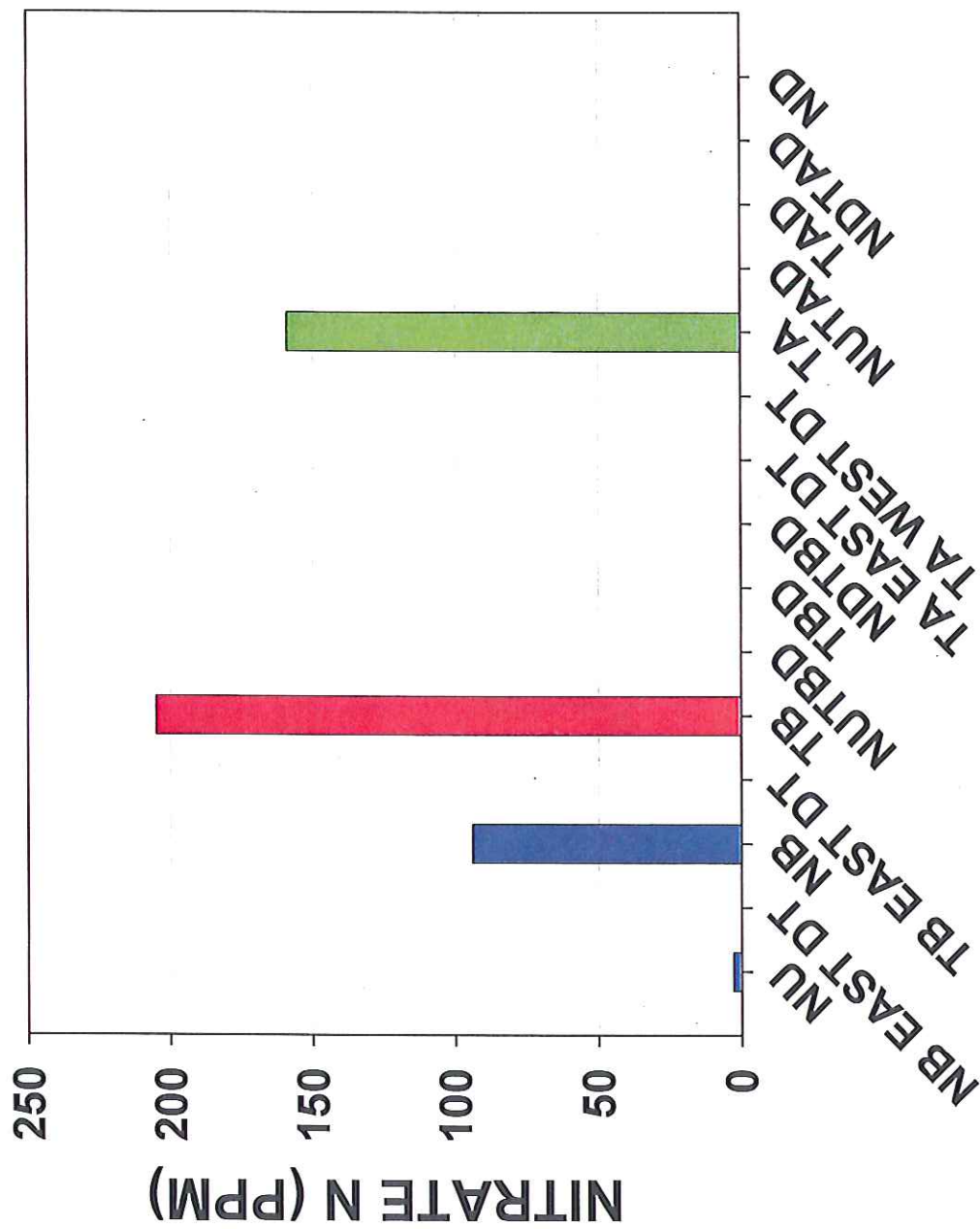
Exhibit A





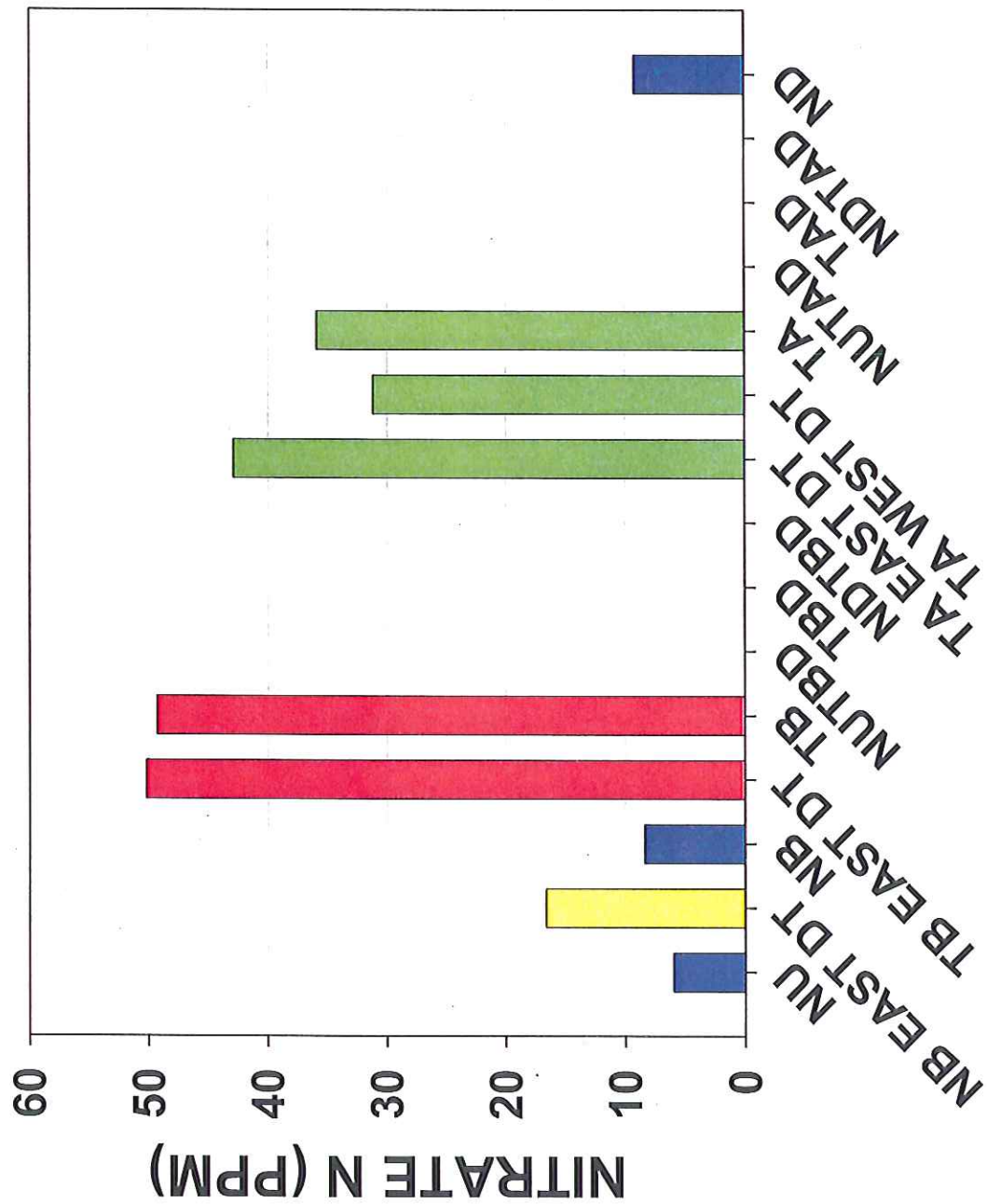
# LARSON ACRES NITRATE

## NOVEMBER 11, 2006



# LARSON ACRES NITRATE

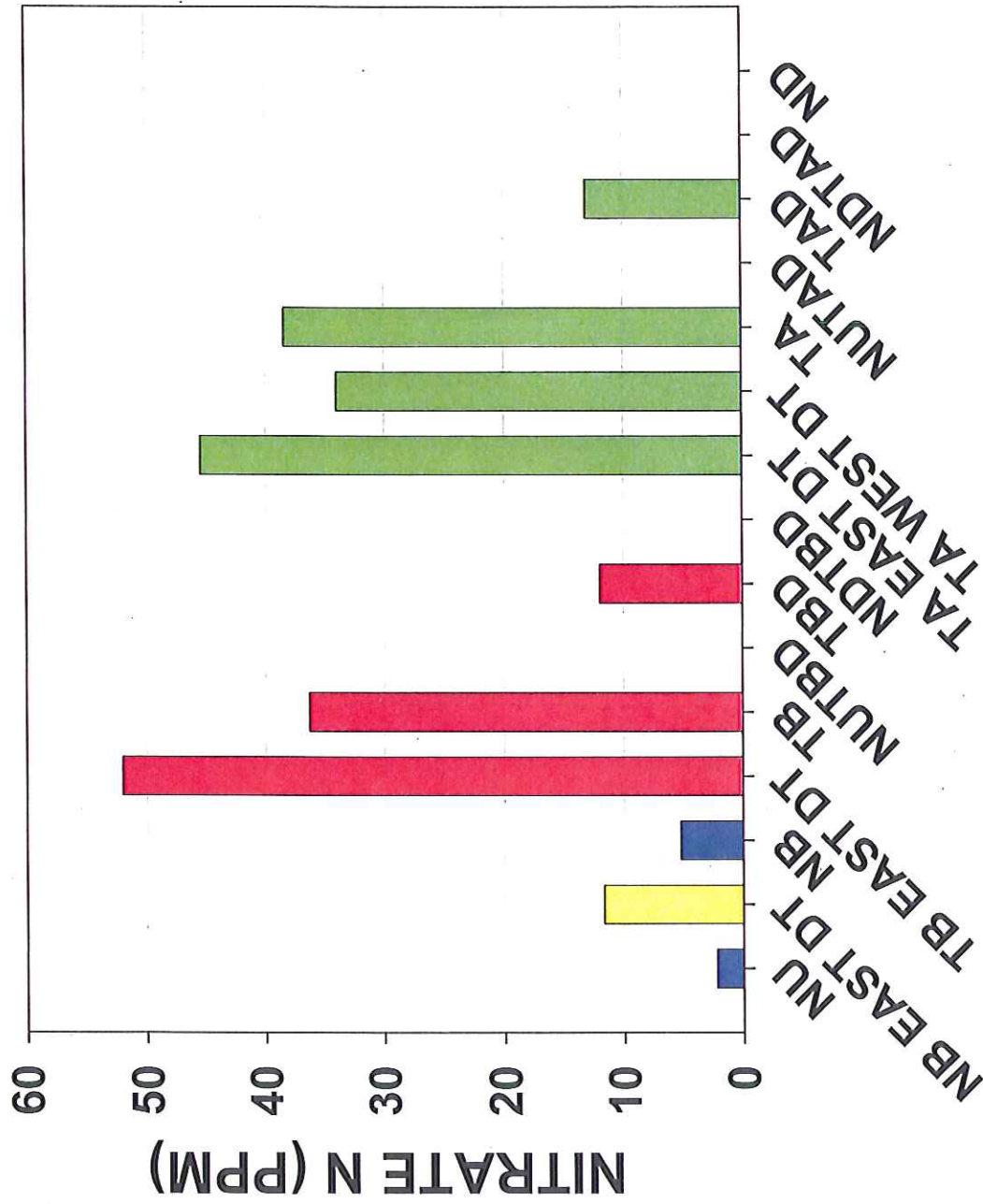
## NOVEMBER 21-24, 2006



SAMPLING SITES

# LARSON ACRES NITRATE

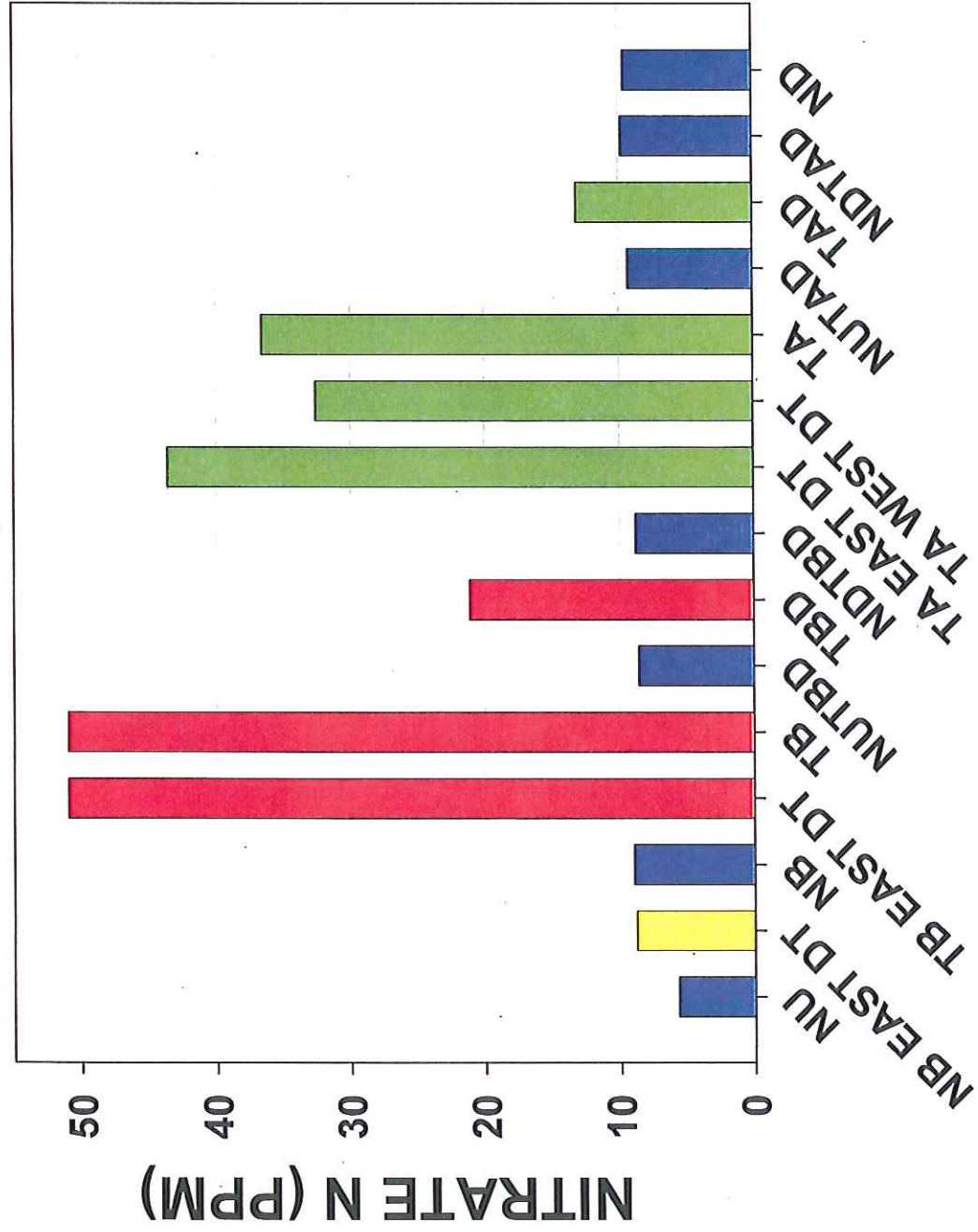
## NOVEMBER 28, 2006



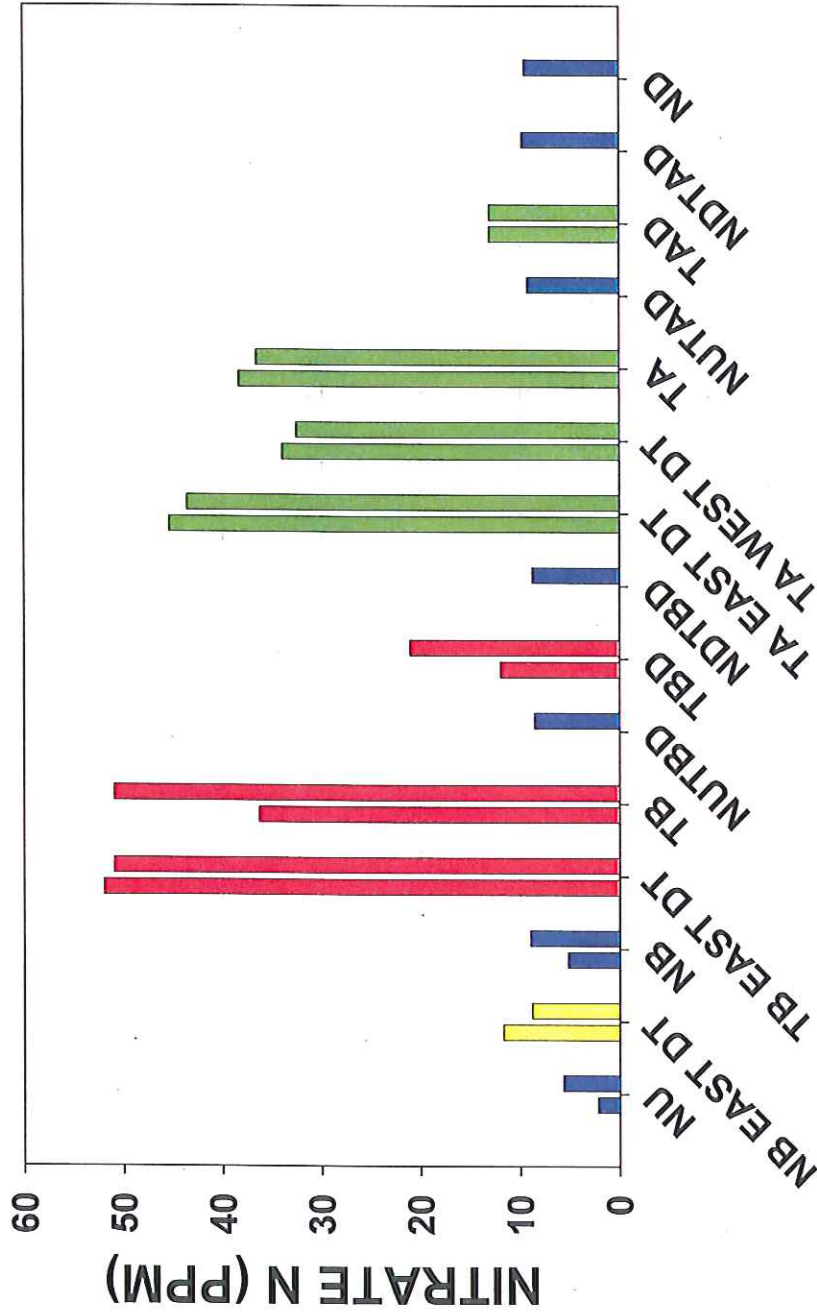
SAMPLING SITES



# LARSON ACRES NITRATE JANUARY 12, 2007



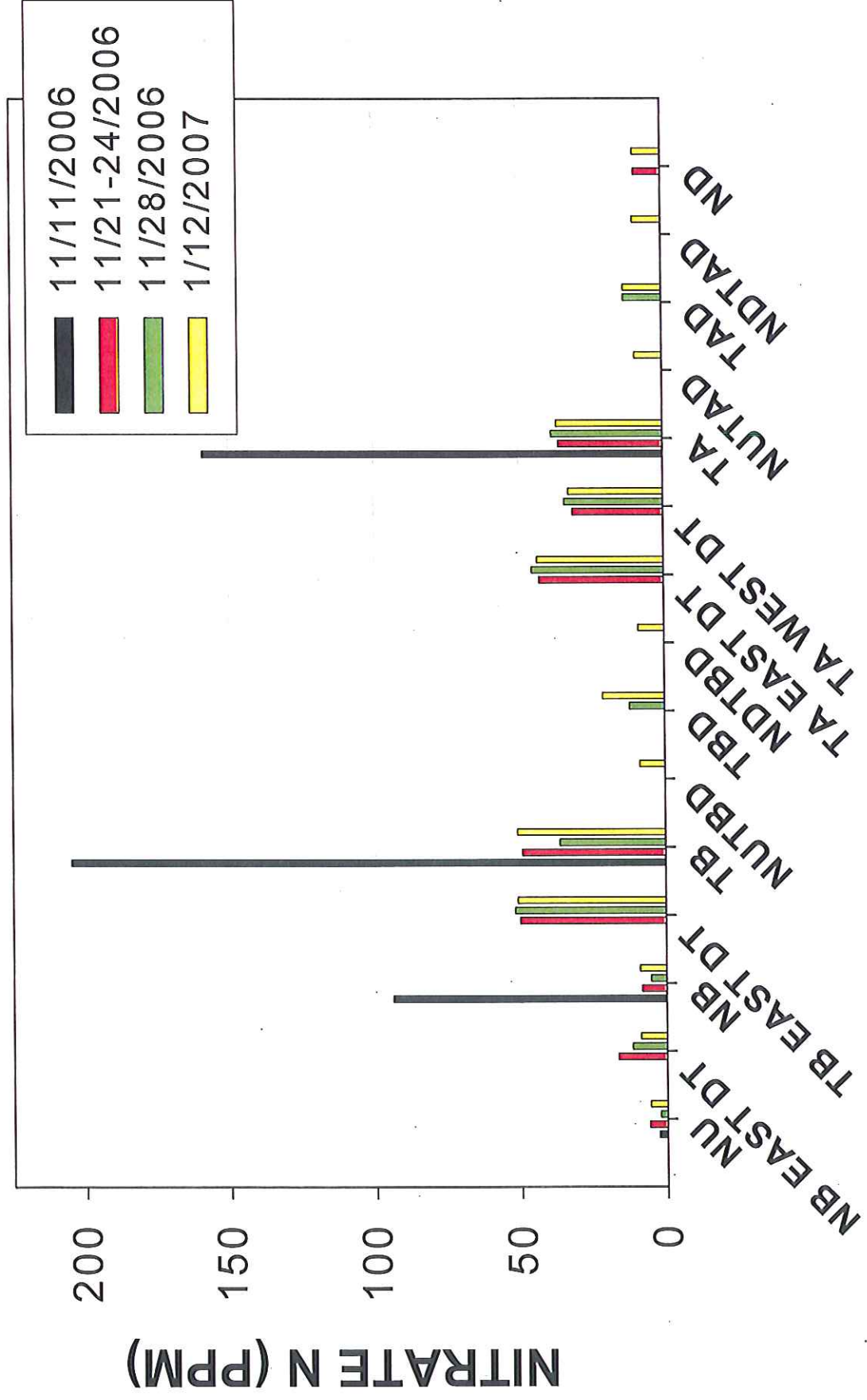
# LARSON ACRES NITRATE NOVEMBER 28, 2006/JANUARY 12, 2007



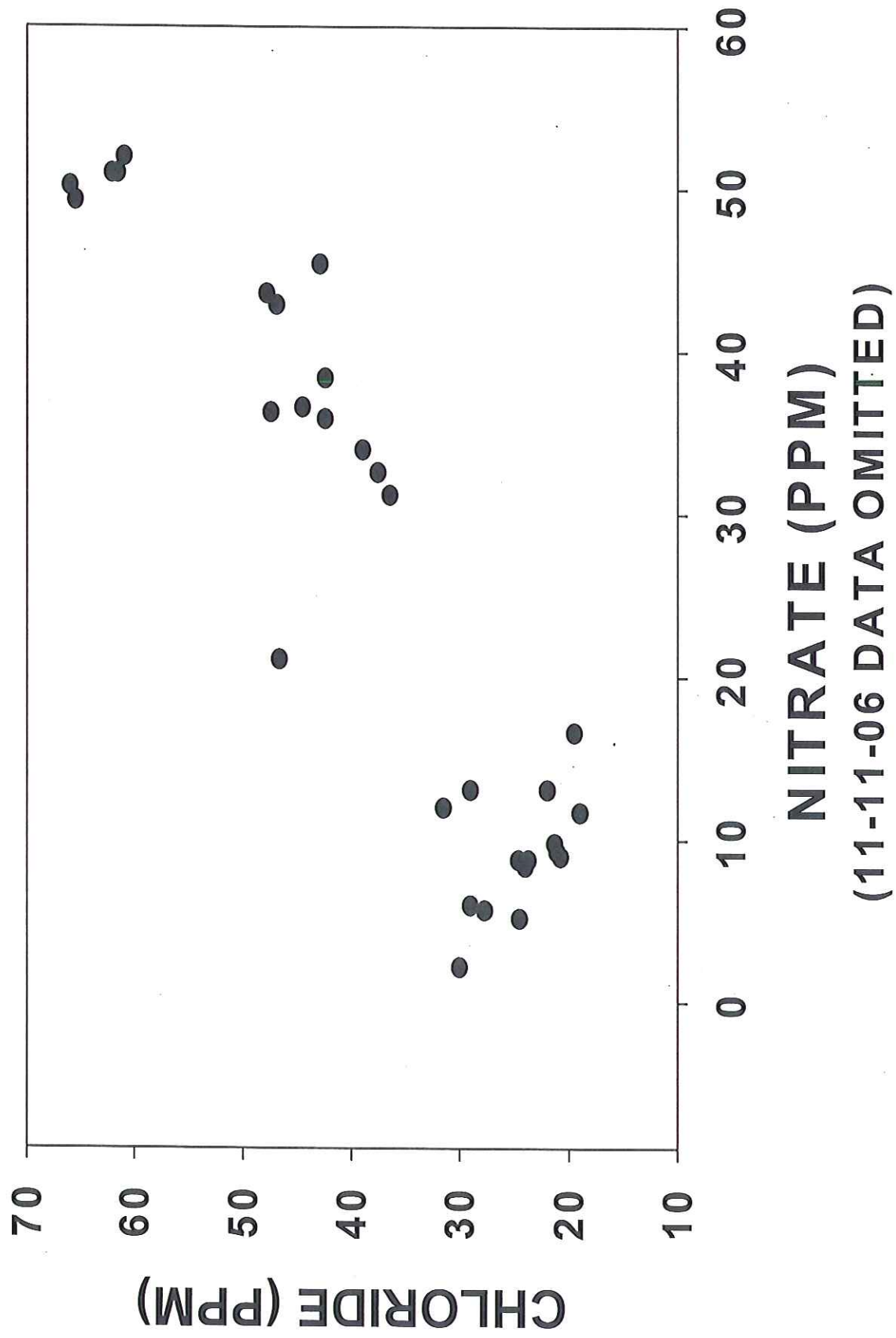
**SAMPLING SITES**  
 RUNOFF EVENT 11/28/06  
 BASE FLOW 1/12/07  
 (SITES WITH 1 BAR ARE 1/12/2007)



# LARSON ACRES NITRATE



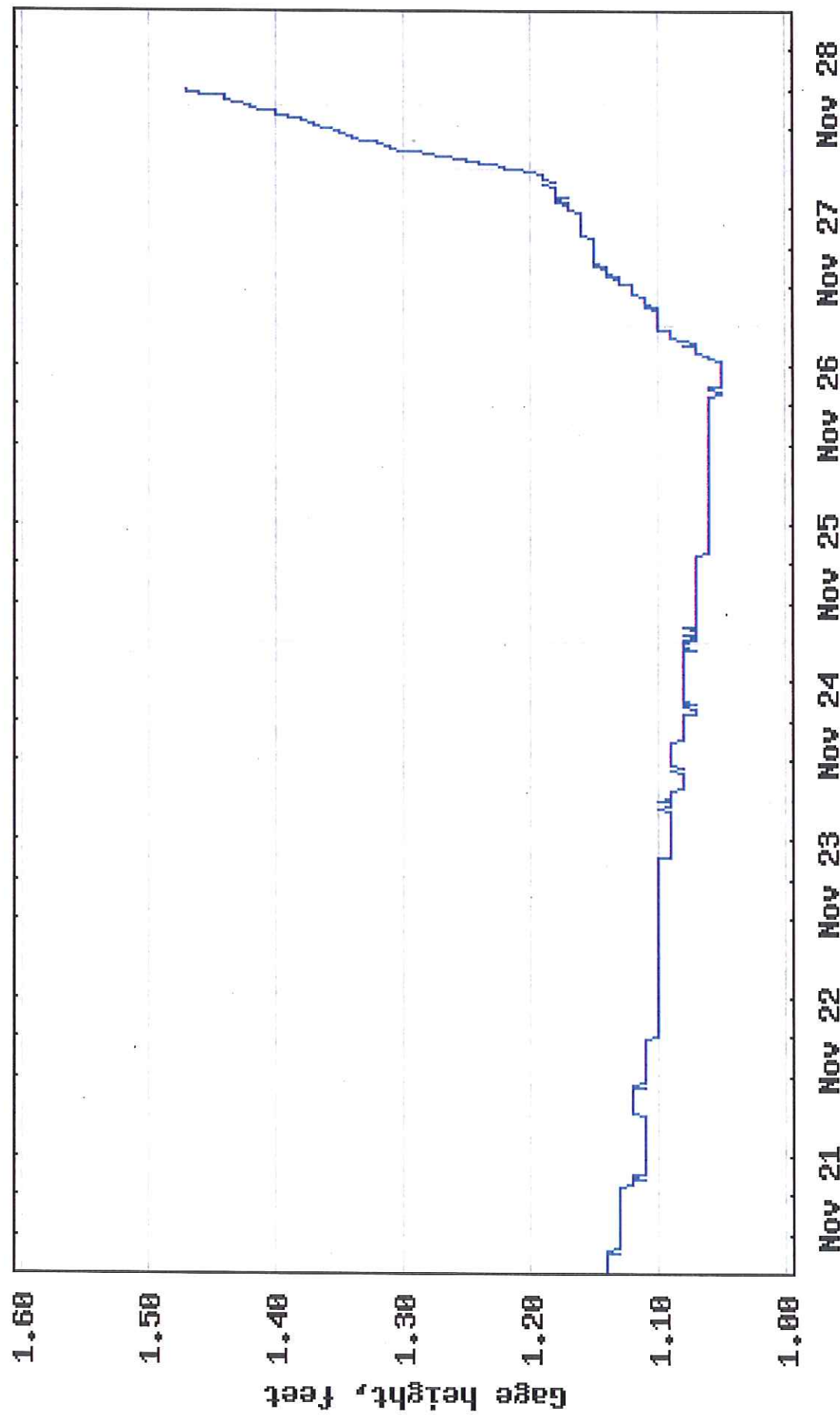
# LARSON ACRES CHLORIDE and NITRATE



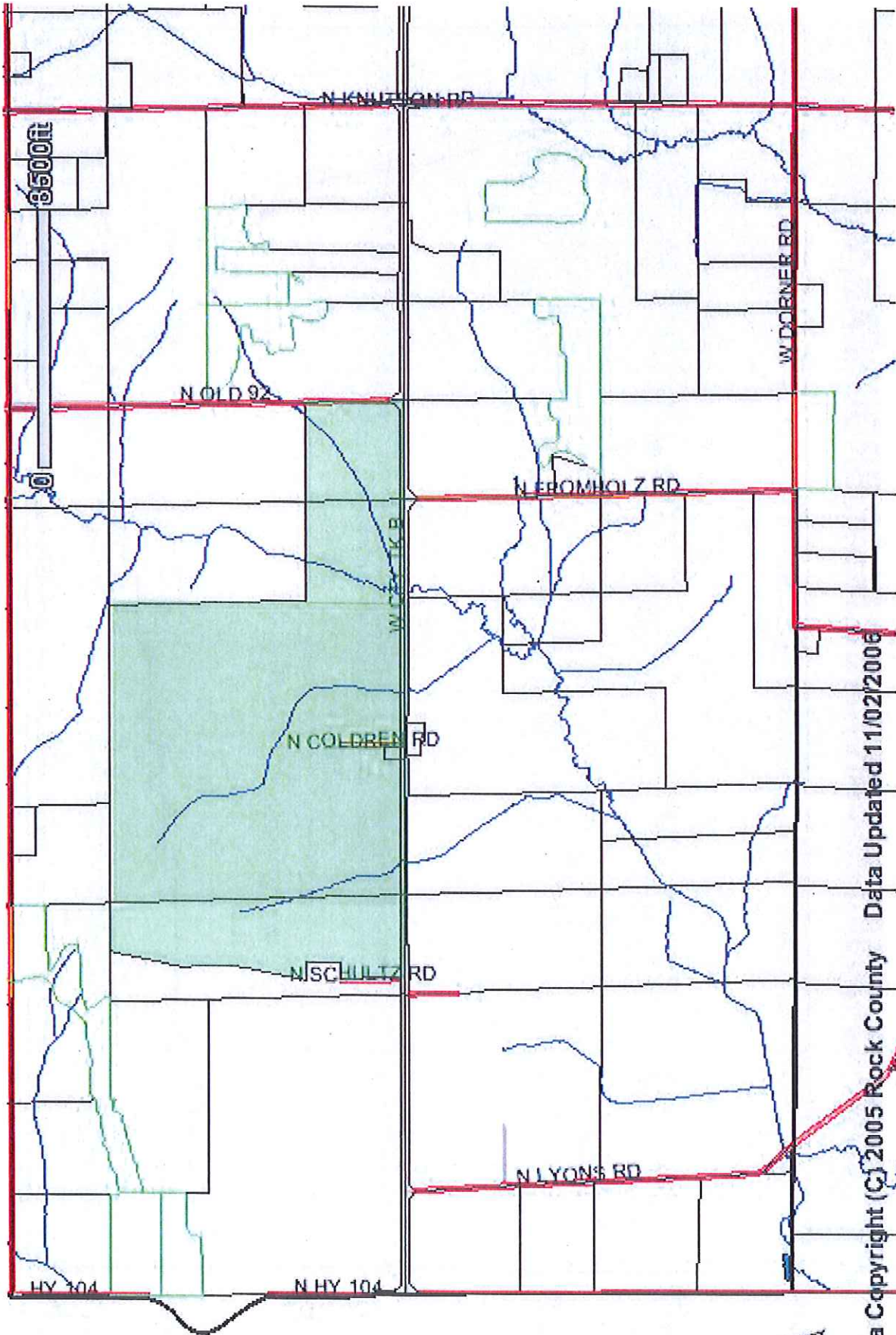




# USGS 05436500 SUGAR RIVER NEAR BRODHEAD, WI



----- Provisional Data Subject to Revision -----



North Arrow

Data Copyright (C) 2005 Rock County Data Updated 11/02/2006



# Attachment #15

Cain, Mark R - DNR

---

**From:** Cain, Mark R - DNR  
**Sent:** Tuesday, July 21, 2009 8:24 AM  
**To:** 'Peter McKeever'  
**Cc:** Nyffeler, Robin T - DNR; Halsted, Michael S - DNR; Hansis, Robert D - DNR; Heggelund, Eric P - DNR  
**Subject:** RE: Larson EA

Peter,

I will send it out to you today as soon as the attachments are ready.

We looked at the two discs you had given me over a year ago containing all the exhibits from the siting hearing on March 10, 2007. We determined that some of the information was not relevant and does not all apply to this current project. We are not able to go through the entire submittal to figure out what is relevant. Therefore, you are welcome to resubmit any of the information that you feel applies to this action and the EA during the comment period. The information must be in a format that is clear and concise.

Thanks,

Mark R. Cain

Wastewater Engineer  
Agricultural Runoff Management Program  
South Central Region  
Wisconsin Department of Natural Resources  
(☎) phone: (608) 275-3252  
(☎) fax: (608) 275-3338  
(☎) cell: (608) 516-5434  
(✉) e-mail: Mark.Cain@wisconsin.gov

---

**From:** Peter McKeever [mailto:McKeever@gmmattorneys.com]  
**Sent:** Monday, July 20, 2009 3:28 PM  
**To:** Cain, Mark R - DNR  
**Subject:** Larson EA

July 20, 2009

Mark,

If you have not already done so, please send me a copy of the Larson EA.

Sincerely,

Garvey McNeil & Associates, SC.  
By

Peter E. McKeever

08/14/2009



# Attachment #16

**The content of this attachment has been addressed in the updated EA and/or comment/response addendums.**

August 10, 2009

Mr. Mark R. Cain  
Wastewater Engineer  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg, WI 53711

Re: Comments on Environmental Assessment – Larson Acres, Inc.

Dear Mr. Cain:

As you know, our Firm represents Larson Acres, Inc. ("Permittee" or "Larson Acres"). On July 20, 2009, the Wisconsin Department of Natural Resources ("WDNR" or the "Department") publicly noticed a draft environmental assessment ("EA") for the proposed expansion of the Larson Acres dairy operation. The purpose of this letter is to provide comments on the EA and on WDNR's preliminary determination that no environmental impact statement ("EIS") is required prior to reissuing Larson Acres' Wisconsin Pollutant Elimination Discharge System ("WPDES") permit. These comments are issued on behalf of the applicant and will first address some administrative clarifications and then provide substantive comments on the EA.

We thank the Department for its efforts in the completion of this EA and look forward to working collaboratively with the Department to finalize the permit reissuance for the operation.

## Administrative Clarifications and Specific Comments on the Draft EA

- On page 2, please revise the second sentence in the first full paragraph to read: "If Larson Acres' Plans and Specifications for the expanded Main Facility..."
- On page 2, please revise the second sentence in the third paragraph to read: "That application allowed them to continue to lawfully operate with an expired permit."
- On page 2, please revise the sixth sentence in the third paragraph to read: "After completion of the proposed expansion, the Farm will generally consist of..."
- On page 2, please revise the second sentence in the fourth paragraph to read: "Larson Acres proposes to construct new buildings, add 2,607 animals (2,660 animal units) and expand the current wastewater treatment system at the Main Facility." The Main Facility currently operates an Integrated Separated Solutions ("ISS") system that was approved by the Department on August 13, 2007. The proposed expansion would include an expansion of this system to accommodate additional manure generated from the addition of animals at the Main Facility.

Michael Best & Friedrich LLP  
Attorneys at Law  
One South Pinckney Street  
Suite 700  
Madison, WI 53703  
P.O. Box 1806  
Madison, WI 53701-1806  
Phone 608.257.3501  
Fax 608.283.2275

David A. Crass  
Direct 608.283.2267  
Email [dacrass@michaelbest.com](mailto:dacrass@michaelbest.com)





- On page 3, please revise the second sentence in the first full paragraph to read: "The Main Facility features...a holding area with a double-22 milking parlor, a calf barn and heifer shed..."
- On page 3, please revise the first sentence in the second full paragraph to read: "The proposed expansion at the Main Facility will include the construction of a cross ventilated freestall barn, milking parlor, four nursery barns for newborn calves, a solids stacking slab, a youngstock barn, additional feed storage and an expanded silage leachate containment/treatment system."
- On pages 4, 12 and 20, please revise to read: "Pursuant to NR 243.15(6), Wis. Adm. Code, Larson Acres will be seeking approval to apply, manage and utilize tea water from the ISS system through a center pivot irrigation system. Tea water will be utilized on a number of fields in the nutrient management plan through traditional land application methods; however, at this time Larson Acres is only seeking approval to spray irrigate tea water on one field."
- On pages 4, 12 and 20, please include the following sentence in the discussion concerning the tea water proposal: "Remote soil moisture sensors have been installed throughout the field proposed for tea water irrigation. Soil moisture sensors indicate the relative saturation of the field at any specific moment in time. This technology will assist Larson Acres and University of Wisconsin-Extension in planning tea water applications so the plant can best utilize the nutrients as well as reduce or eliminate the risk that tea water will infiltrate field tiles."
- On page 6, under the heading "Documents, plans, studies or memos developed to support this proposal include," please revise bullet point 12 as follows: "Town of Magnolia Certified Hearing Transcript (March 10, 2007)."
- Also on page 6, the Environmental Assessment Questionnaire was completed by Jennifer Keuning of Conestoga-Rovers & Associates ("CRA").
- On page 8, please revise the second sentence in the fourth paragraph to delete "grain drying" and "feed milling". Larson Acres does not now conduct nor plan to conduct either of those operations; thus, no air emissions would result from those types of operations.
- On page 9, please update the second paragraph in Section 2(b) to note that Larson Acres has applied for local approval of the proposed expansion. Within that application is an odor score worksheet demonstrating compliance with ATCP 51 and an Odor Management Plan that will help the farm reduce odors and properly manage community concerns.





Mr. Mark R. Cain  
August 10, 2009  
Page 3

- On page 9, please note in the last paragraph that dust control measures, including proper construction and watering of driveways, are outlined in the Odor Management Plan submitted with Larson Acres' application for local approval of the proposed expansion.
- On page 10, please delete the second and third sentences in the third paragraph and add the following: "The July 2004 version of this rule provided a 36-month exemption for livestock operations to come into compliance; this exemption was scheduled to expire in June 2007. However, in 2008, the Natural Resources Board voted to extend the exemption to 2011 to coincide with the completion of USEPA's national study on air pollutants from CAFOs. The extension to 2011 was approved, and the revision to NR 445 providing the extension was enacted in 2008."
- On page 13, in the last paragraph, please note that Larson Acres is managed by experienced operators and has been operating pursuant to and in compliance with its WPDES permit and all applicable federal, state and local laws for nearly a decade. The duration and consistency with which Larson Acres has operated substantially minimizes management risks.
- On page 14, please add the following sentence in the fourth paragraph: "Despite the fact that its current WPDES permit does not require Larson Acres to do so, since 2007 the Farm has been operating pursuant to a nutrient management plan consistent with the new NR 243 rules."
- On page 18, the Department provides a good explanation of local groundwater contamination concerns and how those concerns were previously addressed. As noted on the front page of the Sunday July 26, 2009 Wisconsin State Journal (copy enclosed), historic and ongoing groundwater contamination concerns are prevalent throughout Rock County and are in no way limited to the area immediately surrounding Larson Acres.
- On page 19, please note that Larson Acres' engineering consultants, CRA, performed an engineering review of all existing facilities and structures at Larson Acres. CRA found all existing facilities in compliance with applicable technical standards. CRA's engineering review is included as part of Larson Acres' WPDES permit reissuance application.

Larson Acres Does Not Operate an Industrial Wastewater Facility; An EA is Not Required Prior to Approval of Plans and Specifications for Larson Acres' Proposed Reviewable Facilities

As part of Larson Acres' WPDES reissuance application, WDNR received complete plans and specifications ("P&S") for a proposed expansion on May 19, 2009. Previously in the context of the Rosendale Dairy WPDES permitting process, and now in the context of the Larson Acres



Mr. Mark R. Cain  
August 10, 2009  
Page 4

WPDES reissuance and P&S review and approval, WDNR has taken the position that it cannot approve P&S prior to certifying compliance with Wis. Stat. § 1.11 and Wis. Admin. Code ch. NR 150 (collectively, "WEPA") (see page 1 of the draft EA). Specifically, WDNR claims it cannot approve or reject Larson Acres' P&S until it completes and certifies an EA. As discussed in detail below, WEPA requires WDNR to complete an EA prior to issuing a WPDES permit; it does not require WDNR to complete an EA prior to approving P&S for reviewable facilities such as those presented here. There is no legal support for WDNR's position that an EA must be completed prior to approving P&S. These arguments are more fully developed at Appendix A which is incorporated herein as if set forth fully below by this reference.

#### Additional Documentation Demonstrating Compliance With WDNR and DATCP Statutes and Rules

Since its original WPDES permit was issued in 2000, Larson Acres has operated in substantial compliance with the terms and conditions of that permit and all other applicable statutes and rules. In 2002, Larson Acres first applied for a conditional use permit ("CUP") from the Town of Magnolia. Due to circumstances beyond its control, Larson Acres was required to reapply to the Town of Magnolia for a CUP in 2006. Throughout the CUP permitting processes, a lengthy record was developed (the "Magnolia Record").

The Magnolia Record includes, among other things, numerous correspondence and memoranda supporting the conclusion that Larson Acres followed all required state and local livestock siting procedures. The Magnolia Record also includes correspondence, memoranda and reports documenting attempts by the Town of Magnolia to perform water quality studies. The record clearly demonstrates that, despite receiving written guidance from WDNR and DATCP explaining how to manage potential surface and groundwater quality concerns, the Town sought to conduct water quality studies with the express intent to "prove" that Larson Acres caused or contributed to alleged contamination of surface and groundwater.

Contrary to comments submitted during the public informational hearing on August 4, 2009, the Magnolia Record does not include any credible scientific documentation that Larson Acres' dairy operation was responsible for any of the alleged water quality issues in the Town of Magnolia. In fact, the Magnolia Record is littered with documentation demonstrating that the Town's water sampling, testing and reporting protocol was scientifically flawed from the start and that no credible, scientific-based conclusions regarding potential sources of contamination could be drawn from the data collected by the Town.

Please see the enclosed compact disk for documentation demonstrating that, despite potential negative public perception created by opponents to Larson Acres' heifer facility, Larson Acres has operated and continues to operate in substantial compliance with all applicable statutes and rules.





We Agree that the EA is Adequate and Support the Conclusion that No EIS is Required

Pursuant to NR 150, the reissuance of a WPDES permit for Larson Acres is a Type II action, requiring WDNR to perform an EA. After completing the EA, WDNR must make a determination, based on the EA and the agency's expertise and discretion, whether an EIS is required. WDNR has performed an adequate EA for reissuance of Larson Acres' WPDES permit, and determined that no EIS is required prior to reissuance. We support the adequacy of the EA and WDNR's determination that no EIS is required.

CAFOs in Wisconsin are heavily regulated to ensure that their operations do not cause significant impacts to the human environment. As noted throughout the EA, state laws and regulations require CAFO operators to minimize or eliminate air emissions, odor, fugitive dust, discharges into waters of the state, erosion and runoff due to construction operations, the amount and location where nutrients may be applied to any particular parcel of land, the conditions of the feed and other raw material storage, the amount of groundwater that may be utilized for production processes, the type and amount of pesticides that may be applied or stored at a facility, and almost every other aspect of a CAFO operation imaginable. Nutrient management plans, which provide some of the most stringent requirements for CAFO management, must be updated on an annual basis to ensure that nutrients are being properly managed for the benefit of crops, natural resources, and the general protection of the environment. Additionally, monitoring of the facility is required on a daily basis, far in excess of most of the dairy operations in the state.

In recent months, the Department performed the first and only EIS of its kind prior to issuing a WPDES permit to the Rosendale Dairy. WDNR decided to perform the EIS based on the level of public controversy surrounding the project, not because WDNR considered the proposed permit issuance a "major action" pursuant to NR 150. At the conclusion of that permitting process, WDNR issued a WPDES permit to Rosendale Dairy. It stands to reason that if issuance of a WPDES permit for a brand new 8,000-cow dairy farm would not cause significant impacts to the environment, then re-issuance of Larson Acres' WPDES permit and approval of the proposed expansion – which, when completed, will still leave Larson Acres less than half the size of Rosendale Dairy – will have substantially less potential to cause impacts to the environment. Moreover, attendance at the August 4, 2009 Public Informational Meeting and testimony presented in support of Larson Acres demonstrates that re-issuance of Larson Acres' WPDES permit and approval of the proposed expansion have not generated the overwhelming public controversy necessary to justify an EIS. The EA prepared for this project is adequate; the Department should finalize the document and certify compliance with WEPA.

As noted above, for almost ten years Larson Acres has proven its ability to operate its dairy farm in substantial compliance with all state laws and regulations and maintain a proper nutrient management plan for the manure generated at its farm. Such compliance effectively reduces or eliminates potential environmental impacts from its operations and should be considered as the Department receives public comment on the EA and the draft WPDES permit (when published).





# MICHAEL BEST

& FRIEDRICH LLP

Mr. Mark R. Cain  
August 10, 2009  
Page 6

Thank you for the opportunity to provide comments on the draft EA. Please contact me if you have any questions or need any additional information.

Sincerely,

  
MICHAEL BEST & FRIEDRICH LLP

David A. Crass

Enclosures

cc: Ed Larson  
Mike Larson  
Sandy Larson

Q:\CLIENT\058499\0001\A3411359.3



# Attachment #17

[ner | Archives](#)

Thank you for using our printer friendly story page.

[Return to story](#)

2>Well Protected?\ About A Third Of Wisconsin Residents Get Their Water From Private, Rural Wells - Most Of Which Have Not Been Tested For Contamination\ Wells\ Illnesses Call Attention To Issue

## Wisconsin State Journal :: FRONT :: A1

**Sunday, July 26, 2009**

**By RON SEELY [rseely@madison.com](mailto:rseely@madison.com) \* 608-252-6131**

When Diane Tomlinson turns on her kitchen tap to fill a glass or a cooking pot, she takes a moment to appreciate the water flowing from the faucet.

In the spring of 2008, tests of the private well that serves her rural home near Poynette showed unsafe levels of atrazine - an agricultural herbicide linked to numerous health impacts, including reproductive problems and cancer - in her home's water. Eventually, Tomlinson found that her income qualified her for money from the state's well compensation fund and she was able to have a new well built in January.

Today, Tomlinson no longer takes safe drinking water for granted.

"It's made me very aware. Every time I get a glass of water from the faucet, I think, 'This is nice.' "

Throughout Wisconsin, more than 750,000 private wells such as Tomlinson's provide drinking water in mostly rural areas with no municipal water systems. About one-third of Wisconsin's residents get their water from these wells, according to the state Department of Natural Resources.

Yet, despite such widespread dependence, federal and state oversight of private wells is scant, especially compared with the rigorous regulation of municipal wells. The federal Safe Water Drinking Act, for example, does not apply to private wells, only public water supplies.

And while the DNR regulates the construction of private wells, the wells receive little or no scrutiny after they are installed. A private well can go uninspected and untested for years because there is no requirement that private wells be tested, even when a home is sold. Only about 10 percent of those who rely on private wells ever get them tested, according to the DNR, even though contamination is widespread. Last year, the state spent nearly \$150,000 from its well compensation fund to replace private wells that had been poisoned by bacteria, herbicides such as atrazine, nitrates and arsenic.

Ken Bradbury, a hydrogeologist with the Wisconsin Geological and Natural History Survey, said he has numerous concerns about the state's



private wells, including the lack of awareness and oversight.

"If you own a rural home," Bradbury said, "next to your house, your well is the most valuable piece of the property. It's almost shocking to me how little people know about their wells. And it's your responsibility. Nobody from the government is going to come out and test it for you."

**Pollution problem** The importance of safe drinking water and the dangers of contamination become most apparent when water from a private well suddenly causes somebody to get sick. It's not difficult to find examples.

In early March of 2004, the water coming from the faucet in the home of Judy and Scott Tremel, near Kewaunee, sickened the entire family, including their 7-month-old baby who required emergency medical care because of severe diarrhea. Just days before, the owners of Stahl Farms, a 900-cow concentrated animal feeding operation across the road, spread 10,000 gallons of manure on a field adjacent to the Tremel home.

The Tremels sued Stahl Farms and in January 2006, a federal judge ruled the family was entitled to \$80,000 in damages because studies showed the manure had contaminated their groundwater.

"I don't think I'll ever turn on my tap and not think about it," Judy Tremel said. "Not think about when I turned on the water and manure came out. It's been five years and I still think about it."

Pollution of private wells by manure is a growing problem, according to Mark Putra, section chief of private water supply for the DNR. Putra said a survey of 49 groundwater samples was conducted in 2007 using new tests that differentiate between human and animal bacteria. Of those samples, he said, 28 had animal bacteria while three had bacteria exclusive to humans.

Tom Riewe, a hydrogeologist with the DNR, said manure is of greater concern now because of the increasing number of factory farms and also the growing number of even smaller farms that spread liquid manure, which is more of a threat to streams and groundwater.

"We've seen many more problems with manure contamination in the last five years," Riewe said. "There is much more liquid manure being produced. They just don't know what to do with it."

The state recently passed stricter manure regulations for large, factory-like farms. But Judy Tremel pointed out that wells can also be polluted by manure spread on smaller farms, which aren't always subject to as many manure-handling rules. After watching her family get sick from a manure-contaminated well, she suggests that the owners of private wells pay close attention to what is being spread on the land around them.

**Septic systems** Septic systems also remain a source of contaminants that poison private wells. In June of 2007, 257 people became sick after drinking water from a private well that serves the Log Den Restaurant in Egg Harbor in Door County. Eventually, the illnesses were traced to

norovirus from a leaking septic tank. The restaurant repaired a leaking valve on the septic tank and the water now tests safe.

But Brian Forest, a conservationist with Door County, said the incident shed new light on the susceptibility of private wells to contamination from failed septic systems, especially in the northeast part of Wisconsin where the fractured bedrock underlying the area is covered by just a few inches of dirt and contaminants can be transported quickly without the benefit of filtering by the soil. Tests at the restaurant showed that dye put in the toilets turned up in the restaurant well within six days, Forest said.

Forest said a big part of the problem is that the state Department of Commerce, which regulates septic systems, does not set more rigorous standards for septic tanks in such sensitive areas. Ironically, he added, the restaurant's well had tested safe just before the outbreak.

And it's likely not just the restaurant that is affected. Testing of nearby residential private wells showed that of 81 wells tested, 23 were positive for bacteria. Also, Marshfield Clinic tested four private wells in the area for viruses and three tested positive for low levels of adenovirus, which can cause intestinal or lung infections, and enterovirus, which is linked to meningitis and other infections.

"The whole process should be looked at to see if we're protecting the resource in such a sensitive area," said Forest of the state's inadequate septic rules.

Other 'huge' issues Other contaminants that continue to threaten private wells include nitrate, from fertilizer, and atrazine, a herbicide.

Nitrate contamination of private wells is widespread throughout Wisconsin, although the percentage of wells with levels above the federal health standard of 10 parts per million is higher in heavily farmed counties. The contaminant is a concern for pregnant women and infants younger than six months because it can cause blue-baby syndrome, in which the oxygen-carrying capacity of the blood is greatly reduced. Exposure also has been shown to be associated with lymphoma, gastric cancer, hypertension and thyroid disease.

Statewide, the percentage of wells with levels above the standard is about 13 percent. But wells in agricultural areas are more likely to be affected. Data from the Center for Watershed Science and Education at UW-Stevens Point, for example, show that 46.2 percent of private wells sampled in Rock County have nitrate levels above the 10 parts per million health standard.

"You can't grow corn without nitrogen fertilizer," said Jeff Postle, a hydrologist with the Wisconsin Department of Agriculture, Trade and Consumer Protection. "Nitrate is a huge issue."

Some studies have shown that nitrate levels in wells will only increase as older, cleaner water in the aquifer is replaced by water now being



contaminated.

Atrazine - the herbicide that poisoned Tomlinson's well near Poynette - is yet another contaminant that is especially a problem in agricultural areas. Exposure to the chemical herbicide in drinking water has been linked in some studies to cancer in rats. Data from the Center for Watershed Science and Education at UW-Stevens Point show atrazine was detected in 36.4 percent of private wells sampled statewide. Postle said that because of the dangers of atrazine and the prevalence of polluted wells, the state prohibits its use in 102 areas totaling 1.2 million acres.

'Out of sight, out of mind' With so many contaminants threatening private wells, why don't more people get their wells tested? Although firm numbers are hard to come by, officials with the DNR's private well program say they believe less than 10 percent of those who own private wells get them tested.

"I imagine part of it is education," said the DNR's Putra. "It's out of sight, out of mind."

A 2008 survey of 1,447 private well owners by the state Division of Public Health showed that one-third of the families had never sent their water to a lab for analysis. The primary reasons people gave for not testing their water, according to Lynda Knobeloch, senior toxicologist, were because the water looked and tasted fine or because they had water filters, which do not work for many contaminants plaguing private wells.

Testing for nitrates and bacteria costs \$38 through the Madison-Dane County Health Department and a test for pesticides is \$25. Some states, such as New York and New Jersey, require that private wells be tested when a home is sold. In Wisconsin, according to Putra, the state does not have such a requirement although many lenders do ask for test results before a home loan is approved.

Putra said such a requirement would certainly provide more data on the status of private wells but it would also overwhelm the agency's private water staff which is already struggling to keep up with inspections and other work.

So those who rely on private wells in Wisconsin are mostly on their own. But, with 10 percent or less testing their wells, it appears most are leaving their health to chance.

"There's just an assumption that the water is good," said Bradbury, with the Wisconsin Geological and Natural History Survey.

\ Key Findings\ Among the findings of a State Journal examination of issues related to the state's private wells: \*Less than 10 percent of people who rely on private wells for their water get the wells tested, according to the DNR.



\*While state law requires that well drillers be certified and that private wells be built to certain standards, budget cutbacks at the DNR mean that its shrinking staff of well inspectors is only able to inspect five to six percent of the more than 10,000 private wells installed each year.

\*Contamination of private wells is a common problem. For example, according to data kept by the State Laboratory of Hygiene, 20.2 percent of the private well samples tested statewide in 2008 were positive for bacteria. And, according to the lab, 15.6 percent of private well samples tested statewide in 2008 exceeded the maximum contaminant level for nitrates, which come from nitrogen fertilizers and can harm pregnant women and babies. That figure is much higher in heavily-farmed counties; in Rock County, 46.2 percent of sampled wells tested higher than the maximum contaminant levels, according to data from the Center for Watershed Education at UW-Stevens Point.

#### \ BE DILIGENT ABOUT TESTING

Even when it comes to the installation of private wells, consumers need to be diligent.

Though more than 8,000 private wells will be drilled in Wisconsin this year, only between 5 percent and 6 percent of those wells will be inspected as they are put in, according to Mark Putra, who oversees inspections for the DNR. It's a frustratingly low percentage, Putra said, though higher than when he took over the program in 2001. Then, less than 1 percent of the wells were being inspected.

Putra said he would like to increase inspections until at least 15 percent of private wells being installed get a look from an agency inspector. But that's going to be difficult with only about nine full-time inspectors statewide, a number threatened further by retirements and budget cuts.

"They're dropping like flies," Putra said of his staff.

And the inspections are important. Even Terry Marshall, a well driller who serves on the board of the Wisconsin Water Well Association, said more inspections discourage drillers from cutting corners to keep costs down.

Such bad actors continue to be a concern and provide even more reason for well owners to look out for themselves. Last year, 57 drillers were served notices of violation by the DNR.

Consider just one case from 2008. Govert Well & Pump Inc. of Janesville was ordered to pay \$100,000 for violating Wisconsin well drilling rules. Investigators found that the owners of the company failed to properly construct four wells in Rock County. Most striking, Putra said, was that the drillers falsified 836 water samples they are required to submit to the DNR.

- Ron Seely\ INSPECTIONS IN DANE COUNTY

Contamination of private wells is not only a problem in Dane County but most owners of private wells are failing to have their water tested, according to a study last year by the Madison-Dane County Health Department.

John Hausbeck, environmental health services supervisor for the department, said the county called 6,972 households served by private wells and offered water tests for \$18 instead of the usual \$38. Of the total called, 649 well owners, or about 10 percent, had their water tested.

Of the 649 wells sampled, Hausbeck said, 126, or about 20 percent, tested above the standard for nitrates, a component of fertilizer that can sicken babies or pregnant women. A similar number, 127, tested positive for bacteria, which can cause gastrointestinal illness.

"In my book, that's a high number of wells impacted by contaminants," Hausbeck said. "This gave us strong evidence that people should be testing their wells more than they are, at least once a year for bacteria."

Hausbeck said several who participated in the survey said it was the first time they had tested their well water.

"That's scary," Hausbeck said. "These systems need attention. They need maintenance."

- Ron Seely\ HOW TO KEEP YOURSELF SAFE

Tips for private well owners \* Get your well tested every year for bacteria and, if you live near heavily farmed areas, for contaminants such as nitrates and atrazine.

\* Use a state-certified laboratory that conducts drinking water tests. A list of certified labs is available on the state Department of Natural Resources Web page at [www.dnr.state.wi.us/org/water/dwg/privatelabs.pdf](http://www.dnr.state.wi.us/org/water/dwg/privatelabs.pdf).

\* Testing more than once a year may be warranted if someone in your household is pregnant or nursing, there are unexplained illnesses in your family, your neighbors find a dangerous contaminant in their water or you note a change in your water's taste, odor, color or clarity.

\* Be aware of what is happening on land around your property and well. Take note, for example, of new construction or of farmers spreading manure.

- Environmental Protection Agency

Return to story

**madison.com** is operated by Capital Newspapers, publishers of the Wisconsin State Journal, The Capital Times, Agri-View and Apartment Showcase. Copyright ©, Capital Newspapers. All rights reserved.